

## Claims

1. A connecting device (1) for the plug-in connection of at least one pipeline (6), comprising a housing part (2) having at least one receiving opening (4) for the insertion of the pipeline (6), and a clamping ring (8), which is arranged in the receiving opening (4) and, in order to lock the pipeline (6) in place, interacts with an inner cone (16) of the housing part (2), the housing part (2) being made in two parts from a base part (28) and an insert part (32), which is connected to the latter via a snap-action form-fitting connection (30) and has the inner cone (16), and the insert part (32) having a dirt seal (34) for resting on the circumference of the inserted pipeline (6), characterized in that the insert part (32) consists of a first, relatively hard and dimensionally stable plastic material and the dirt seal (34), consisting of a second, relatively soft and elastic plastic material, is molded directly onto it as a single piece with a cohesive material joint.

2. The connecting device as claimed in claim 1, characterized in that the insert part (32) is of sleeve-shaped design and is inserted or can be inserted into a widened portion (36) of the receiving opening (4) of the base part (28) in a manner such that it provides a circumferential seal at least against the penetration of dirt and similar foreign bodies, the insert part (32), in the inserted state, preferably lying completely within the base part (28) and ending flush on the opening side.

3. The connecting device as claimed in claim 1 or 2, characterized in that the sleeve-shaped insert part (32) has, for the purpose of being able to release the pipeline (6), at least two radially elastic spring arms (40) which are formed by longitudinal slots (38) and engage releasably by means of radially outwardly

protruding latching attachments (42) in a form-fitting manner in corresponding latching openings (44) of the base part (28).

5     4.    The connecting device as claimed in claim 3, characterized in that the longitudinal slots (38) are filled with the material of the dirt seal (34).

10    5.    The connecting device as claimed in claim 1 or 2, characterized in that the snap-action form-fitting connection (30) has closed latching elements running in the circumferential direction.

15    6.    The connecting device as claimed in one of claims 1 to 5, characterized in that a supporting sleeve (26) which is coaxial with the plug-in axis (10) is arranged within the base part (28) for the frictional engagement in the inserted pipeline (6).

20    7.    The connecting device as claimed in one of claims 1 to 6, characterized in that the housing (2) can be connected to a further assembly part via at least one connecting section (46).

25    8.    The connecting device as claimed in claim 7, characterized in that the connecting section (46) is designed as a pipe attachment (48) for insertion into a receiving opening.

30    9.    The connecting device as claimed in claim 8, characterized in that the base part (28) is designed as a two-component molded part of plastic, the region of the pipe attachment (48) consisting of a relatively soft material and the remaining region consisting of a  
35    relatively hard material.

10.   The connecting device as claimed in claim 7, characterized in that the connecting section (46) is designed as a screw thread attachment (50), in

particular as an externally threaded connector.

11. The connecting device in particular as claimed in one of claims 1 to 6, characterized in that the housing  
5 part (2) can be inserted with a plug-in section (58) as a press-in cartridge into a connecting opening of an assembly part.

12. The connecting device as claimed in claim 11,  
10 characterized in that the housing part (2) has, on the circumference of the plug-in section (58), at least one tooth element (64) for the form-fitting or frictional engagement in the connecting opening.

13. The connecting device as claimed in claim 11 or  
15 12, characterized in that the plug-in section (58) has, on its circumference, at least one tooth element (64) which acts in the manner of a thread such that the housing part (2), on the one hand, can be plugged in  
20 with the plug-in section (58) axially into the connecting opening and, on the other hand, can be removed from the connecting opening by unscrewing it.

14. The connecting device as claimed in claim 12 or  
25 13, characterized in that the housing part (2) or the base part (28) consists of metal, in particular brass, the tooth element or tooth elements (64) of the plug-in section (58) being molded on as a single piece.

15. The connecting device as claimed in claim 12 or  
30 13, characterized in that the housing part or base part (2, 28) consists of plastic, the tooth element or tooth elements (64) consisting of metal and being embedded in some regions in the plastic.

35 16. The connecting device as claimed in one of claims 2 to 15, characterized in that the insert part (32), for the circumferential sealing toward the base part (28), is inserted or can be inserted into the base part

(28) with a press fit and/or has an outer circumferential sealing bead (70).

17. The connecting device as claimed in claim 16,  
5 characterized in that the circumferential sealing bead (70) of the insert part (32) consists of an elastic material and, in particular, is molded on as a single piece with a cohesive material joint together with the dirt seal (34) and preferably with the material filling  
10 the longitudinal slots (38).

18. The connecting device as claimed in one of claims 1 to 17, characterized in that the insert part (32) has positioning means (72) on its outer circumference for  
15 the automatic aligning on insertion into the base part (28), the positioning means (72) being formed, in particular, by means of two diametrically opposite, radially projecting longitudinal ribs (74) which run axially in the insertion direction and engage in  
20 corresponding longitudinal grooves of the base part (28).

19. The connecting device as claimed in one of claims 1 to 18, characterized in that retaining edges (76, 78)  
25 are formed within the insert part (32) following the inner cone (16) as an axial end stop for the clamping ring (16) as an axial end stop for the clamping ring (8).

30 20. The connecting device as claimed in claim 19, characterized in that first retaining edges (76) are formed in the region of the spring arms (40) and second retaining edges (78) are formed in the regions situated between the spring arms (40), the first retaining edges  
35 (76) being offset with respect to the second retaining edges (78) by an axial offset (X) in the direction of the inner cone (16) in such a manner that the clamping ring (8), when subjected to a force ( $F_z$ ) acting in the pulling-out direction of the pipeline (6), first of all

only comes to bear against the first retaining edges (76) and, as a result, the spring arms (40) are subjected to a radially outwardly acting retaining-force component ( $F_H$ ).